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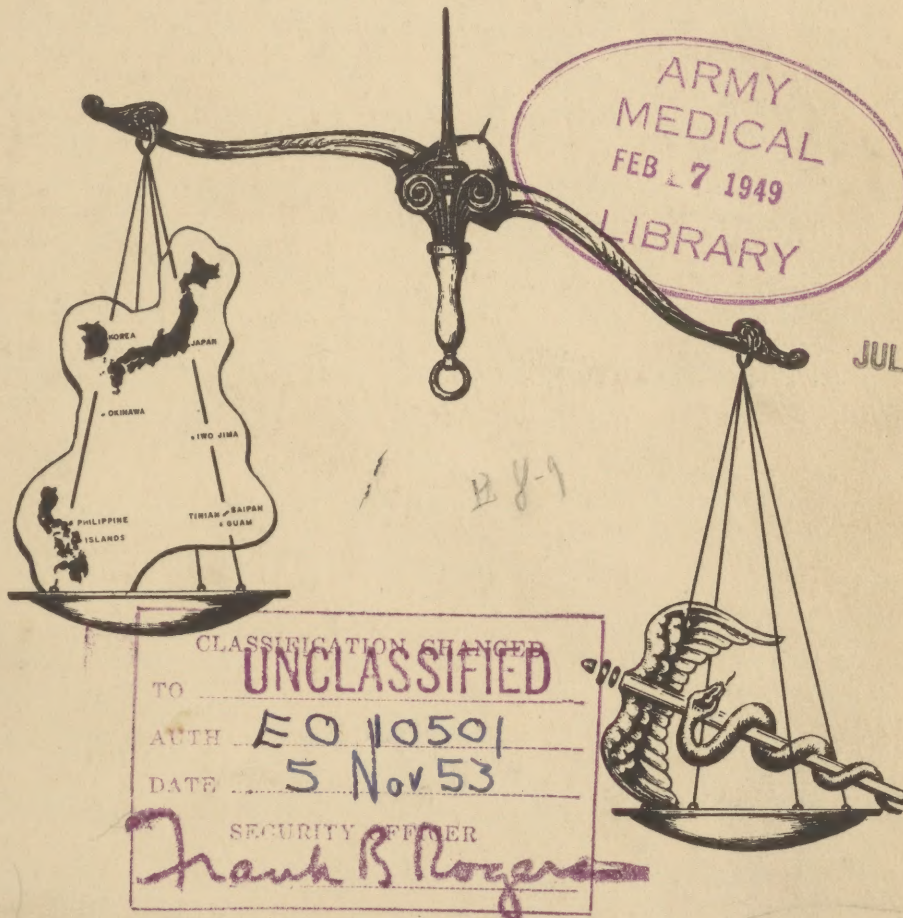
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U.S. Army Far East Command,
Medical Section

VOL IV NO 1

1 JAN 1949



A FAR EAST PERIODICAL OF MEDICAL DEPARTMENT INFORMATION

SURGEON'S CIRCULAR LETTER

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Organization of the Medical Section, GHQ, FEC

The following is a list of commissioned personnel currently assigned or attached to the Medical Section:

Maj. Gen. James A. Bethea, MC, U.S. Army
Colonel George N. Schuhmann, MC
Major James L. LaCombe, MSC

Surgeon
Deputy Surgeon
Executive Officer

ADMINISTRATIVE DIVISION

1st Lt. Elvis E. Bates, MSC

Director

PLANS AND OPERATIONS DIVISION

Captain Felix G. Rajecki, MSC
Captain Vincent I. Hack, MSC
Captain James D. Grindell, MSC
1st Lt. Maurice F. Watson, MSC

Director
Deputy Director
Medical Records Officer
Plans & Operations Officer

SUPPLY AND FISCAL DIVISION

Lt. Col. Everett W. Partin, MSC
Captain Robert E. Watson, MSC
Captain Glenn C. Irving, MSC

Director
Deputy Director
Budget & Fiscal Officer

PERSONNEL DIVISION

Lt. Col. Wilfred A. Emond, MSC
Captain Vernon H. Loisel, MSC

Director
Acting Deputy Director

CONSULTANTS

Colonel Robert E. Blount, MC
Colonel Irby R. Pollard, VC
Colonel Melville A. Sanderson, DC
Lt. Col. Arthur P. Long, MC
Lt. Col. Harlan H. Taylor, MC
Major Mildred I. Clark, ANC
Major Kermit E. Jones, MSC

Medical
Veterinary
Dental
Preventive Medicine
Surgical
Chief Nurse
Sanitary Engineer

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GENERAL HEADQUARTERS
FAR EAST COMMAND
MEDICAL SECTION

SURGEON'S CIRCULAR LETTER

APC 500

NUMBER 1

1 January 1949

PART I

ADMINISTRATIVE

<u>SUBJECT</u>	<u>SECTION</u>
Organization of the Medical Section.	I
Army Medical School.	II
Nursing Program, FEC	III
Supplement to Paper "Compilation of Army Regulations and other Directives Pertaining to the Department of Army Policy in the Elimination of Inapt and Unadjustable Enlisted Personnel"	IV
Health of the Army	V
Automatic Pipette Washer	VI
Recent Department of the Army and FEC Publications	VII
Index.	Inside Back Cover

I. Organization of the Medical Section

There were no changes in commissioned personnel currently assigned or attached to the Medical Section during the period covered by this publication.

II. Army Medical School

The Medical Department is presently confronted with one of the most serious medical officer shortages in Army history. To alleviate the situation, Army medical officers have revived a study concerning possible creation of an Army Medical School to give 4-year training to prospective officers.

The plan is to establish a Service School to train students for careers as Army medical doctors. Under the supervision of Major General Raymond W. Bliss, Surgeon General of the Army, a survey has been initiated to obtain data relating to such factors as cost, curriculum, faculty members and other pertinent information. After a detailed analysis, the findings are to be brought before military and civilian leaders.

Responsibility for the study is vested with the Medical Plans and Operations Division of The Surgeon General's Office headed by Colonel A. H. Schwichtenberg, formerly Surgeon, Far East Air Forces.

III. Nursing Program, FEC

In an effort to further the nursing education of each nurse in the FEC, the following suggestions are recommended for inclusion in the current nursing programs:

1. It is suggested that commanding officers of hospitals initiate measures to inform Army Nurse Corps members of their staff that they should take advantage of lectures being given by the visiting consultants. The lectures would be a means of keeping nurses better informed on the latest medical developments within the ZI and should enable them to render greater assistance to Surgeons of the Far East Command.

2. One command has initiated a plan of asking nurses to discuss the nursing phase

of topics presented at the medical officers' monthly meetings. This has developed added interest for both doctors and nurses and it is recommended that all commands consider the implementation of similar programs.

3. It is further suggested that the nurses establish a nursing journal club in connection with the presently organized nurses monthly professional meeting and that they be informed that popular text-books on nursing may be obtained through normal medical supply channels. Requests for subscriptions to additional journals that may be desired should be forwarded to The Surgeon General through technical channels.

IV. Supplement to Paper "Compilation of Army Regulations and Other Directives Pertaining to the Department of Army Policy in the Elimination of Inapt and Unadjustable Enlisted Personnel", by Captain Dan G. Kadrovach, MSC, Adjutant, 385th Medical General Dispensary, GHQ, FEC

Reference is made to the above article which appeared as Section XX, Part II of the Surgeon's Circular Letter, dated 1 November 1948. The following supplemental information is offered in view of Change 1 to AR 615-368 and Change 2 to AR 615-369.

The procedures as outlined in the above changes were interpreted by the Group Surgeon, Headquarters and Service Group, and concurred in by the Commanding General of Headquarters and Service Group, General Headquarters, Far East Command, to permit the elimination of the medical officer from the 368 and 369 Boards. In view of the decision, the following form was locally devised for use in processing applicants for both boards, and the following SOP was established for use in Headquarters and Service Group of General Headquarters:

HEADQUARTERS 385TH MEDICAL GENERAL DISPENSARY GENERAL HEADQUARTERS FAR EAST COMMAND APO 500		
SUBJECT: Medical Report of #368		Date: _____
TO: Recorder 368 Board, Headquarters and Service Group, General Headquarters, Far East Command, APO 500		
1. In compliance with the provisions of AR 615-368 and AR 615-369 and changes thereto, forwarded herewith Medical Report in the case of		
(Last Name)	(First Name)	(Middle Initial)
(Grade)	(ASN)	(Organization)
(Station)		
RECORD OF PHYSICAL EXAMINATION		
Medical History:		
Physical Findings:		
2. There are no disqualifying physical defects sufficient to warrant discharge under the provisions of AR 615-361.		
Signed: _____		
Rank: _____ M.C. Medical Officer		
PSYCHIATRIC HISTORY: RECORD OF PSYCHIATRIC EXAMINATION		
EXHIBIT "D"		

RECORD OF PSYCHIATRIC EXAMINATION	
Psychiatric History:	
Findings:	
Impressions:	
Recommendations:	
3. There are no disqualifying mental defects sufficient to warrant discharge under the provisions of AR 615-361. At the time of this examination subject individual was mentally responsible and was so far free from mental defect, disease, or derangement as to be able, concerning the particular acts charged, both to distinguish right from wrong and to adhere to the right.	
Signed: _____	
Rank: _____ M.C. Psychiatrist	
*Strike out non-applicable words.	

(a) After review of the request for board action by the Commanding General to assure administrative completeness and compliance by subordinate commanders with the intent and spirit of the regulation, the request for board action together with all supporting papers are hand-carried to the Adjutant of the 385th Medical General Dispensary.

(b) The determination is made by the Adjutant as to which of the eight sick-call points operated in the Tokyo area provides medical service to the individual upon whom board action has been requested. The above form is then initiated in six copies together with a Consultation Request on the Neuro-psychiatric Clinic of the 361st Station Hospital, in duplicate, and all papers are referred to the medical officer normally holding sick call for the unit to which the individual is assigned. (This action permits a physical evaluation of the individual by a medical officer who is thoroughly familiar with his past complaints, as it has been demonstrated that those individuals

on whom board action has been initiated normally have long medical histories with a variety of minimal complaints.)

(c) Following the medical examination of the individual the medical officer completes one copy of the above form, "Record of Physical Examination", in longhand and signs all other copies, to include the Psychiatric Consultation request. All papers are again returned to the Adjutant for final typing, checking, and return to the Recorder of the board concerned. (This procedure removes the administrative burden of preparation of forms from the medical officer.)

(d) The Recorder delivers all papers and the individual concerned to the Neuro-psychiatric Clinic of the 361st Station Hospital for evaluation of any psychiatric considerations and completion of "Record of Psychiatric Examination" by the Psychiatrist. Upon completion of psychiatric examination, all papers are collected by the Recorder for presentation to the Board.

It is believed that the procedure as outlined has the following advantages:

(a) Each individual, prior to appearance before a 368 or 369 Board, has had the maximum consideration that can be given by the Medical Department. In every instance he has been seen by the unit medical officer and the psychiatrist, who have all statements regarding the individual's conduct and reasons for board action in their possession prior to the examination. The Medical Department has the advantage of taking the time necessary to prepare a fair and just evaluation of both the medical and psychiatric considerations and to eliminate any causes for discharge under the provisions of AR 615-361.

(b) The medical officer is not required to sit on the board of officers where, in the past, he generally had never seen the subject prior to the board's assembling.

(c) The responsibility for safe handling and expeditious processing, outside the time required by the Medical Department, rests with the Recorder of the board concerned.

The procedures noted have been in effect in Headquarters and Service Group since 1 October 1948 and, as far as is known, have worked to the advantage of all concerned.

V. Health of the Army

The following article on "Health of the Army" taken from the Statistical Bulletin, Metropolitan Life Insurance Company, Volume 29, Number 8, August 1948, is printed for your information.

The article was published voluntarily by the Metropolitan Life Insurance Company which arrived independently at the conclusions presented.

* * * * *

"With the new peacetime draft in the offing, there is renewed public interest in health conditions in the Army. This is a matter of particular importance to the young men who will be selected, as well as to their families. A comparison of provisional figures on the mortality and morbidity experience of the Army in 1947 with the prewar data indicates that the health of the Army is excellent and has shown distinct improvement.

"By 1948 the Army situation had become fairly well stabilized, although we had some troops stationed in many parts of the world. Data based on those stationed within the continental United States give a fairly good picture of the situation in the area where the new inductees will serve. Exact comparisons cannot be made with prewar figures because the age composition of the Army has changed.

"The best evidence of the improvement in Army health since prewar days is found in the sharp reduction in mortality. The 1947 death rate from all causes among troops in the United States shows a reduction of nearly 30 percent from 1939. Even more striking is the fact that the death rate from disease in 1947 was 36 percent below the rate prevailing in 1939. The death rate from accidents also has declined, and in 1947 was about 24 percent below the prewar level. This is all the more remarkable because accident risks in the Army have increased in step with the greater use of mechanized equipment and airplanes.

"As for the morbidity figures, care must be taken in interpreting them because they are

influenced by periodic variations in diseases, particularly of the respiratory system. Another factor is Army policy, which has laid increasing stress on prompt reporting of illness. Other things being equal, this would tend to raise the recent figures. Nevertheless, the 1947 figures for the incidence of disease among troops in the United States show, in the aggregate, little change from 1939, while for accidents the figure has been cut in half.

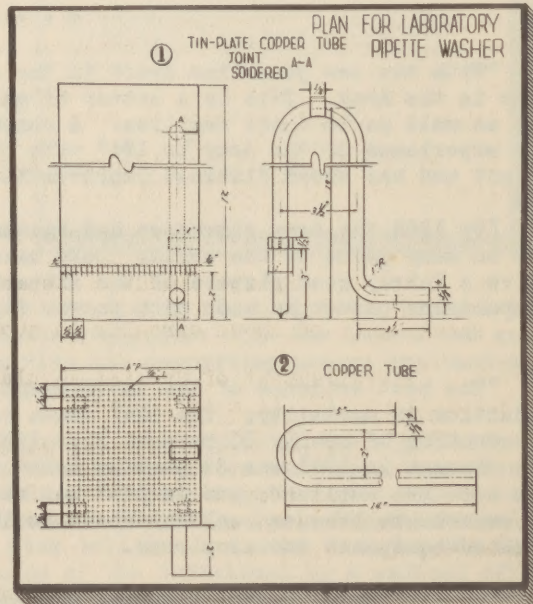
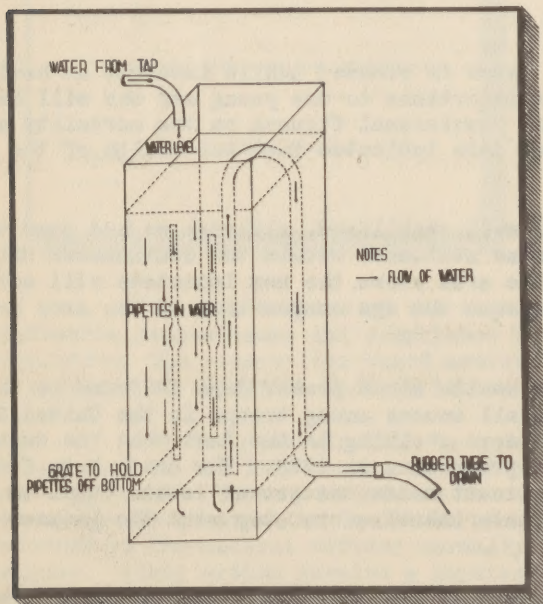
"For the common respiratory diseases and influenza, the rate in 1947 was the lowest recorded since comparable data first became available nearly a quarter of a century ago. The current rate is about 20 percent lower than the 1939 rate. Although the rate for pneumonia has increased, this represents pretty much the diagnosis of virus forms which were not recognized back in 1939, and which are relatively mild. The total figure for respiratory diseases shows marked improvement. The sickness rate from tuberculosis is almost at an irreducible minimum. The rates for the other major illnesses show relatively unimportant changes in 1947 from 1939. As is to be expected in a force containing a large proportion of recruits, the incidence of communicable diseases and rheumatic fever rose. The increase in the latter reflects also greater alertness on the part of Army physicians so that this increase probably represents more frequent diagnosis, rather than an actual rise in prevalence. The same consideration applies in part to a recorded increase in neuropsychiatric disorders.

"Much of the gain in Army health reflects the advances in research and treatment in military as well as in civilian medicine during the war years. The medical services in the armed forces have been quick to adopt new techniques and drugs which medical research has developed. Efforts have been made to improve the level of the professional services in the armed forces, and to a greater degree than ever before encouragement is given to medical officers to qualify in the specialties, and good contacts have been established with the major medical schools. In addition, the progress in Army health has been enhanced by improved medical organization, and the medical departments are being put on a sounder professional basis.

"The change in the accident picture is most heartening for the reasons already given. A good part of the reduction in accident fatalities is due to the Army's safety campaign. Efforts have likewise been made to make equipment as fool-proof as possible and to improve instruction in its use.

"These facts on the recent health progress in the Army and on the improvement of its health services are most reassuring. It may safely be said that the medical and health protective services provided by the Army are superior to those to which most young men are accustomed in civilian life. With the accent on prevention, further progress may be expected in the control of disease and accidents in our armed forces."

VI. Automatic Pipette Washer



Colonel Paul H. Martin, MC, submitted the sketches of an Automatic Pipette Washer, which was improvised at the 118th Medical Station Hospital.

For operation of the washer, the cooling water from the laboratory distillation apparatus is used. The larger the syphon tube, the shorter the emptying time will be with an increase in the washing effect. The apparatus as shown will fill and empty approximately twelve (12) times per hour.

VII. Recent Department of the Army and FEC Publications

- AR 40-210, C 7, DA, 10 Mar 48, "Prevention and Control of Communicable Diseases of Man"
- AR 40-25, C 2, DA, 20 Oct 48, "Women's Medical Specialist Corps - General Provisions"
- AR 615-361, C 2, DA, 27 Oct 48, "Discharge - Medical", Changing Sec 1. General - a. (1) and (2) Physical Standards and Responsibility
- AR 615-368, DA, 27 Oct 48, "Enlisted Personnel - Discharge - Unfitness", Superseding AR 615-368, 14 May 47
- AR 615-369, DA, 27 Oct 48, "Enlisted Personnel - Discharge - Inaptitude or Unsuitability", Superseding AR 615-369, 14 May 47 and C 2
- AR 615-360, C 1, DA, 27 Oct 48, Discharge - General Provisions. Par 1. d(2) "An Individual Discharged as a Result of Disability, etc." Par 3 c(e) added
- CIR 298, DA, 27 Sep 48, "Conversion of Positions for Warrant Officer"
- CIR 316, DA, 12 Oct 48, Sec IV: "Appointment of Professional and Technical Experts or Specialists in ORC", Par 7(3)(b) concerning conscientious objectors applying for Medical Department Reserve
- CIR 322, DA, 13 Oct 48, Sec I; par 2: Sec V, Cir 96, WD, 47 Extended; Par 4 Cir 106, WD, 47, Extended
- CIR 323, DA, 15 Oct 48, "Dental Treatment"
- CIR 324, DA, 18 Oct 48, "Recruiting for Regular Army and Air Force" amending DA Cir 66, 48; Par 9, Mental Qualifications; Par 10, Physical Qualifications
- CIR 325, DA, 18 Oct 48, "Clinical Records" - concerning the discontinuance of the Clinical Records Branch of The Records Administration Center, AGO, St. Louis 20, Missouri, effective 15 Oct 48
- CIR 326, DA, 19 Oct 48, "Installation - Station Hospital, Camp Gordon, Georgia, Designated Camp Gordon Annex of Oliver General Hospital"
- CIR 330, DA, 22 Oct 48, "Procurement of Second Lieutenants for Active Duty"; Par 3 d Physical Examination; Par 3 e Mental Requirements. Sec II, Method of Application
- CIR 335, DA, 27 Oct 48, "Discharge"; Pertaining to the Discharge of EM Assigned to the Detachment of Patients and being returned to duty
- CIR 336, DA, 28 Oct 48, "Career Guidance - Appointment of Warrant Officers to the Regular Army and United States Air Force" (DA Cir 38, 48, amended)
- CIR 339, DA, 28 Oct 48, "Dental Officer Procurement - Senior Student Program"
- CIR 343, DA, 1 Nov 48, "Establishment of Department of the Army Special Regulations"

Paragraph 1 of above circular is quoted for information:

"1. Establishment of Special Regulations. - a. A medium of publications to be known as Special Regulations (SR) is established.

b. The purpose of Special Regulations will be to -

(1) Provide one medium for the publication of administrative instructions and directives now published in a Technical Manual, Technical Bulletin, or Department of the Army Pamphlet or Memorandum, etc.

(2) Supplement Army Regulations by publishing detailed administrative procedures

and other implementing instructions to basic policies contained in Army Regulations. Future Army Regulations will be restricted to the enunciation of Statutory authority, basic policy, and basic regulations.

(3) Publish administrative directives of general application and such other administrative instructions for subject matter which required specialized treatment such as career guidance programs, movement regulations, strength accounting, etc.

c. Special Regulations will be numbered according to classifications of subject matter with the same subject numbers assigned to Army Regulations and a further subnumber for identifying additional instructions pertaining to the same subject, e.g., the Army Regulation on allotments of pay is AR 35-5520; any detailed procedures and supplemental instructions on allotments of pay will be published in the SR 35-5520-series.

d. The format for Special Regulations will be the same as for Army Regulations."

CIR 348, DA, 4 Nov 48, "Serum Specimens for Standardization of Diagnostic Bacterial Antigens"

CIR 349, DA, 4 Nov 48, "Forwarding of Records to Veterans Administration", par 2, X-Ray Film

BUL 37, DA, 21 Sep 48, "Executive Order 9988: Prescribing Portions of the Selective Service Regulations", Sec 623.3

ARMY-NAVY Catalog of Medical Material July 1948, Ch BUL No. 2

G.O.62, DA, 15 Sep 48, "Pharmacy Unit, ROTC, Established at University of California, Medical School, San Francisco, California

G.O.70, DA, 25 Oct 48, Effective 1 Oct 48 Chicago Branch of Industrial Mobilization and Procurement Planning Division, Army-Navy Medical Procurement Office, was established at Chicago QM Depot, Chicago, Illinois

SR 40-100-1, 12 Nov 48, "Medical Service - Hernia". These Regulations supersede WD MEMO 40-100-1, 8 Aug 46. Disposition of Military Personnel with Hernias - Regulation implements AR 40-100 and AR 40-115

T/O&E 1-1452, 23 Sep 48, "Headquarters, Strategic Reconnaissance Group" Sec III

T/O&E 1-1453, 27 Sep 48, "Strategic Reconnaissance Squadron", Sec III, page 30, Medical

T/O&E 17-51, 7 Oct 48, "Armored Cavalry Regiment (Light)", Sec II

T/O&E 44-115, 8 Oct 48, "Antiaircraft Artillery Gun Battalion (120 mm)", Sec II

T/O&E 7-95, 1 Oct 48, "Infantry Battalion, Separate, Sec II. B. Medical Detachment"

T/O&E 10-147, 22 Oct 48, "Quartermaster Bakery Company, Mobile", Sec III, page 6, Medical

T/A 20-130-FEC, 24 Aug 48, "Japan and Korea Occupation Areas"

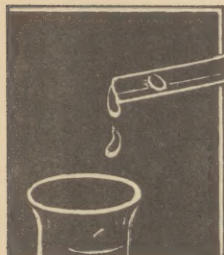
Medical Dept. Equipment List No. 6, Sep 48 - Contained Information Formerly Published in MED 10-6, 26 May 45, Pertaining to Air Force Units

PART II

TECHNICAL

<u>SUBJECT</u>	<u>SECTION</u>
Diagnosis of Influenza.	VIII
Smallpox Vaccination.	IX
Oguchi's Disease - A Discussion on.	X
Intravenous Procaine Therapy.	XI
Diagnostic and Therapeutic Injections in Orthopedic Practice (In Two Parts, Part II . . .)	XII
Nursing Aspects of Ear, Nose and Throat Diseases.	XIII

VIII. Diagnosis of Influenza by Lt Colonel Arthur P. Long, MC, Preventive Medicine Consultant, Medical Section, GHQ, FEC



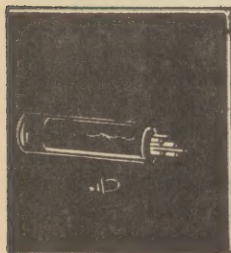
This is the season of highest incidence of respiratory tract infections and of the occurrence of influenza, should the latter develop. In the 1946 - 1947 season, the Far East Command admission rates for common respiratory disease and influenza increased from slightly over 100 per thousand per annum in December to over 300 in January and just above 400 in February, the peak month. There was no remarkable increase in these infections during the 1947 - 1948 season, the rate remaining essentially the same (about 115) for December, January, February and March; decreasing thereafter. So far this season, the incidence of these infections has been quite low, the combined rate (common respiratory infection and influenza) for the entire Far East Command being in the neighborhood of 60 to 75 for September, October and November. At this writing (early

December) there is some indication of an upswing for the overall command and a definite upward trend in some of the major commands and smaller units.

During periods of increased respiratory disease incidence, the possibility of the occurrence of epidemic influenza A or B should be borne in mind. It is equally important to realize that in non-epidemic periods, the clinical diagnosis of influenza cannot be supported without substantiating laboratory evidence. If there is a significant increase in the incidence of respiratory tract infections with symptoms and signs consistent with those commonly associated with influenza, this disease should be suspected and the proper diagnostic procedures applied to determine its presence or absence. Suspected or proven outbreaks of influenza should be reported immediately to the Surgeon, Far East Command, (paragraph 5, GHQ, FEC, Circular 64, 3 June 1947).

Facilities for specific laboratory diagnosis of influenza are present at the 406th Medical General Laboratory, Tokyo, serving Japan, MARBO and Korea, and at the 3rd Medical General Laboratory, Fort McKinley, PHILCOM, for PHILCOM and RYCOM. In suspected cases, blood serum specimens 15 cc should be aseptically collected and submitted to the appropriate laboratory as follows: the first or acute specimen should be obtained within 48 hours of the onset of illness. The specimen should be forwarded to the laboratory and followed by a second or convalescent specimen obtained 7 to 10 days later. Shipment of specimens should be by the most expeditious route. Each should be labelled with the patient's name, the date of onset of illness, the date of collection, and history of past immunization to influenza.

IX. Smallpox Vaccination by Lt Colonel Arthur P. Long, MC, Preventive Medicine Consultant, Medical Section, GHQ, FEC



Importance. Smallpox is one of the most infectious and virulent of the communicable diseases. At the present time current outbreaks among the native populations in the Far East Command bring this forcibly to mind. It is a disease which may attack individuals in any age group. Whether a given individual will develop the disease depends on two factors: the exposure of that individual and the degree of immunity possessed when such exposure occurs. Smallpox is a disease which cannot be prevented or controlled by any sanitary measure now known. Its prevention rests entirely on the production of adequate immunity in all individuals who might have contact with the disease. This means, as far as the Army is concerned at least, proper vaccination of all personnel and the maintenance of immunity by successful revaccination at stated intervals or upon possibility of exposure. Vaccination is the only positive effective method for prevention.

There are in effect adequate provisions for the accomplishment of this procedure in military personnel and in civilians under military jurisdiction. Despite this fact, smallpox has occurred in the Army. During the war just past, considerable numbers of cases occurred among troops stationed in areas where exposure was made possible by a high incidence in the civilian population. These cases and the deaths attending them resulted, not from the lack of provision by the Army for vaccination of troops, but in the vast majority of cases from failure on the part of medical officers to insure that the vaccination procedure was carried out properly and the result interpreted correctly. These cases and deaths are directly attributable to professional failures.

The Vaccine.—Nature and mode of action. Smallpox vaccine is a suspension of living vaccinia virus. The material currently used in the Army is produced in the skin of healthy calves

and is known as calf dermo vaccine. The immunity produced results from the occurrence in the vaccinated individual of a true infectious process which is localized vaccinia. The individual in whom this infection has been established is then immune not only to vaccinia itself but also, by cross protection, to variola, or smallpox. The protection afforded then is not in the true sense of the word a specific one but results from the fact that vaccinia virus infection produces a cross immunity to infection by smallpox or variola virus. This fact answers the question which is sometimes raised as to the specificity of American-made vaccine against smallpox infections occurring in widely scattered areas of the world. There is no evidence to indicate that American vaccinia virus will not protect against smallpox virus wherever it be found. On the contrary, there is good evidence to indicate that such protection does occur when vaccination has been performed properly using a highly potent vaccine and has been followed by a satisfactory result. There is some indication, however, that in the presence of intimate and extensive contact with highly virulent strains of smallpox virus a higher level of immunity is required than under ordinary conditions. Accordingly for individuals who may be subjected to unusual degrees of exposure or who are in areas where highly virulent smallpox occurs, smallpox vaccination should be required at more frequent intervals than are normally followed in the United States or elsewhere where the disease is not epidemic. For example, troops stationed in the Orient, where smallpox occurs in a high incidence and is particularly virulent in nature, should be vaccinated at annual intervals or even more frequently if the chance of exposure is particularly great.

Handling and storage. It is important to emphasize that smallpox vaccine, since it contains living virus, is a fragile material and subject to deterioration. This deterioration which represents the death of the virus and hence, loss of potency, occurs at a variable rate depending upon the conditions under which the vaccine is kept. The maximum period during which the vaccine can reasonably be expected to maintain its full potency even under proper conditions of storage is three months. If kept above 5°C (41°F) this loss of potency is very rapid. Ideal storage conditions are at temperatures below freezing. There need be no fear of breakage since the glycerin content of the material is high. The best place to keep smallpox vaccine is in the freezing compartment of a mechanical refrigerator which is so adjusted that the temperature therein will be at freezing or below at all times. If such facilities are not available, the vaccine should be placed directly on ice. Under no circumstances should it be allowed to stand at atmosphere or room temperatures if such temperatures are above 5°C or 41°F. Packages containing vaccine for shipment should be properly refrigerated. This is best accomplished by placing the vaccine between blocks of dry ice and insulating the entire package so as to preserve the ice en route. When dry ice is not available for such shipments, containers suitable for wet ice or ice salt combinations should be used. The medical officer who uses smallpox vaccine should make certain that proper shipment storage conditions have been constantly maintained. When smallpox vaccine received at an installation is considered to have been improperly packed and hence, possibly exposed to undesirably high temperatures, this fact should be reported immediately to the depot or other installation making the shipment.

It is important that arrangements be made for the immediate transfer of new supplies of vaccine to storage under proper conditions. Even though properly packed for shipment, loss of potency may result if the material is allowed to stand without refrigeration for any considerable period of time after receipt.

The period of expected potency of smallpox vaccine is extremely short. Therefore, particular attention should be given to the matter of requisitioning of this material. The amounts requisitioned should in general not be in excess of the anticipated needs for approximately two months. It is poor practice to have outdated vaccine on hand, and if the material does become outdated, it should be discarded and not used.

Care in the dispensary or clinic. Proper care of vaccine begins with the manufacture, continues through shipment to the depot, storage in depot, issue to the individual station, and storage at the station. But it does not end there. Carelessness in the dispensary or clinic may well result in the rapid destruction of the potency of the vaccine on hand. The place for smallpox vaccine is in the refrigerator not on a desk or vaccinating table. Only that quantity of vaccine which is to be used immediately should be removed from refrigerated conditions. The medical officer in charge of a dispensary or clinic where smallpox vaccine capillaries are to be found on a table or desk at room temperature is considered to be lax in his professional duty. It is impossible to over-emphasize the fact that smallpox vaccine is perishable and loses its potency rapidly particularly under unfavorable conditions. The greatest of care in its storage and handling is essential.

The Vaccinating Procedure. The procedure of smallpox vaccination is not to be undertaken lightly nor with the idea that it requires neither skill nor attention. The contrary is true. It

is only successfully performed vaccinations that protect against smallpox. A poorly performed procedure, not correctly interpreted, is worse than useless in that it gives rise to a false sense of security.

Prior to the application of the vaccine, the arm should be prepared by washing with soap and water and thoroughly dried. Ether or acetone may be applied to the area but it must be allowed to dry completely before the vaccine is deposited on the skin. It is extremely important to emphasize that alcohol or other skin antiseptics should never be used in the preparation of the vaccination site. Such antiseptics tend to inactivate the virus and hence, reduce the probability of a successful vaccination.

For accomplishment of the vaccination procedure, the multiple pressure method should be used. In applying this method, it is to be clearly understood that the needle is to be held essentially parallel to the skin and the side of the needle point pressed through the drop of the vaccine and into the skin about 30 times. A little resistance should be felt as the needle point is raised but no blood should be drawn. A common error in this procedure is made when the needle is held perpendicular to the skin rather than horizontal and the point then applied directly, thus making multiple "punctures" rather than multiple pressures. It is the multiple pressure and not the multiple puncture method which is now accepted as being the most satisfactory procedure for the application of smallpox vaccine. Excessive trauma interferes with the proper interpretation of the vaccination reaction.

The area of the vaccination should be kept small. There is no proven relationship between the size of the reaction produced and the degree of immunity resulting. An area approximately 1/8th inch in diameter is considered satisfactory.

No dressing should be applied following vaccination. Complications to vaccination, rare as they are, occur much more frequently in the presence of a dressing than when none is used.

It should be continually emphasized that smallpox vaccination properly performed and interpreted will prevent smallpox but that to accomplish this purpose the procedure must not be routinized to the extent that meticulous care in its accomplishment is sacrificed. It should also be emphasized that, if there is known or even suspected exposure of an individual or group to smallpox, revaccination should be accomplished at once without reference to previous vaccination history. The procedure requires little time and negligible disability results. It should be clearly understood that while the occurrence of an immune reaction signifies a certain state of immunity in the individual concerned the production of this reaction will in itself stimulate the immunity already present and thus build it to a higher level.

Interpretation of Reaction. Proper interpretation of the reaction produced following smallpox vaccination is perhaps the single most important feature of the entire procedure. Failures of vaccination should not result if potent vaccine is used and the method of its application is correct. However, on occasion, factors beyond the control of the vaccinator may cause a failure. When this occurs, revaccination is to be accomplished as many times as necessary until a satisfactory result is obtained. If the failure is not noted, however, and the necessary revaccination is not accomplished, the individual concerned may well be completely unprotected. In such an instance, the medical officer responsible for the conduct of the vaccination is entirely responsible and can be judged only as failing to perform his professional duty. An occasional failure to obtain a satisfactory reaction after vaccination may be justified. That such failure be unrecognized cannot be justified.

Great emphasis should be given to the fact that a definite reaction must occur and must be observed before the vaccination can be considered as satisfactory. The absence of a reaction must in all instances be interpreted as a failure of vaccination. In no instance should the word of the vaccinated individual be taken as to the presence or absence of a reaction. The interpretation must be made by a medical officer himself or an individual in whom he has complete confidence and whose word he is completely willing to accept. The responsibility, however, lies directly and entirely with the medical officer concerned. It is apparent from the occurrence of smallpox during World War II that failures on the part of medical officers to interpret smallpox vaccinations accurately and to revaccinate when indicated have resulted in numerous cases and deaths from this disease.

The reactions which follow a successful vaccination are vaccinia or primary reaction, vaccinoid or accelerated reaction, or immune or immediate reaction. These are adequately described in TB MED 114, November 1944. They are also well described and illustrated in the text "Military Preventive Medicine" by Dunham, published by the Military Service Publishing Company. Every med-

ical officer should be completely familiar with these various reactions and have a full knowledge as to their significance. Most important of all, every medical officer should be completely aware of the fact that a successful vaccination is always followed by one or the other of these reactions. No reaction at all means that the vaccine was impotent or that the procedure was performed in an unsatisfactory manner.

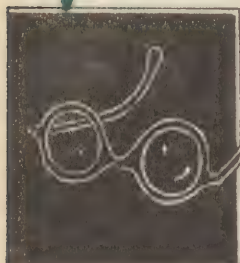
Recording of Reaction. No vaccination should be considered to have been completed until interpreted and the type of reaction recorded on the individual's immunization register. In general, vaccinations should not be performed unless it is known that the individual to be vaccinated will be available for a period of at least one week during which time the necessary observations may be made. If at any time it is impossible to comply with this general rule, it is incumbent upon the officer responsible for performing the vaccination to arrange for satisfactory interpretation and recording by a competent and reliable individual. The medical officer's initials following a smallpox vaccination entry on the immunization register indicates not only that the vaccination was performed but also that a satisfactory result was obtained.

Summary. The key points of importance in the conduct of successful vaccination may be summarized as follows:

Potent vaccine
Shipment and storage of vaccine under proper conditions
Use of vaccine within its expiration date
Proper preparation of the vaccination area
The multiple pressure method of vaccination correctly executed
Proper interpretation of the vaccination result
Recording and certification of the vaccination reaction

References: AR 40-210, Prevention and Control of Communicable Diseases of Man; TB MED 114, November 1944, Immunization; "Military Preventive Medicine" by Dunham

X. Oguchi's Disease - A Discussion on - by Wm. C. Caccamise, Captain, MC, AUS, Public Health Officer of Chiba Prefecture, Japan



Oguchi's Disease is a most interesting congenital abnormality of the eye which is manifested by non-progressive hemeralopia and specific fundus oculi findings. It was in 1907 that Oguchi first reported a case of stationary night-blindness with grayish-white discoloration of the fundus. In 1911 Komoto applied the name Oguchi's Disease to those cases with findings similar to those in Oguchi's first case.

Originally the following were considered to be the essential findings in this disease:

There is frequently a history of parental consanguinity. Approximately 62% of all cases which have been diagnosed to date have shown such consanguinity.

Except for impaired dark-adaptation examination of the eyes for functional disturbances is usually negative. Visual acuity, visual fields, and color sense are usually normal. Any impairment in these functions which may occur in an individual case is considered to be coincidental and not attributable to the Oguchi's Disease.

External examination of the eyes is negative.

The ophthalmoscopic findings are most striking. The optic disc is normal in color. Its borders are sharp and well-defined. Frequently there is a well-developed choroidal ring. The retinal vessels are of normal caliber. The fundus presents a diffuse grayish-white discoloration which is usually most prominent in the central area, but which in some cases may involve the entire fundus. No discrete pigment spots - black or white are to be seen. The retinal vessels as they pass over the grayish-white areas appear dark, almost black, so that the arteries and veins in such areas cannot be differentiated from each other. There is usually a marked whitish reflex along the vessel borders. The choroidal vessels are not visible, except

perhaps in the uninvolved periphery of the fundus. The macula appears dark in contrast to the surrounding discolored areas.

The hemeralopia and ophthalmoscopic findings are completely non-progressive.

In 1914 another finding was noted in the typical cases of Oguchi's Disease. At that time Mizuo and Nakamura reported the most interesting fact that the grayish-white discoloration of the fundus gradually disappeared and the color and appearance of the eyegrounds became entirely normal after the eye had been covered for several hours. Such color change together with the complete disappearance of all abnormal ophthalmoscopic findings is termed the Mizuo Phenomenon. This phenomenon is now included among the essential findings in Oguchi's Disease.

Since the first case was reported, approximately sixty cases have been reported in Japan. Originally Oguchi's Disease was considered to be peculiar to the Mongolian race. In 1927, however, Scheerer reported the first definite case outside of Japan - the case of an eighteen year old German male. Since then an additional eight cases have been reported in non-Japanese. A review of American literature through 1940 revealed only one case report - the first case ever reported in an American. Except for this one case report, no original article concerning Oguchi's Disease had been published in English up to 1941. A review of the literature subsequent to that date could not be carried out by this Medical Officer because of the unavailability of such literature in the accessible library facilities.

A case which was examined by this Medical officer in the Eye Clinic of the Chiba Medical College is described briefly as follows:

The patient was a 32 year old Japanese female who had been aware of night-blindness since childhood. There was a history of consanguinity in the grandparents. Except for markedly impaired dark-adaptation there were no functional disturbances. External examination of the eyes was negative. Ophthalmoscopic examination of the right eye revealed a normal optic disc. The vessels were of normal color and caliber as they crossed the disc. The fundus showed a grayish ground-glass discoloration throughout. The retinal vessels once they had left the optic disc appeared dark, almost black, so that they could not be differentiated from each other. No pigment spots were to be seen. There was no evidence of an inflammatory process - either active or inactive. The most striking characteristic of the fundus was the complete invisibility of the choroidal vessels - vessels which are usually very easily seen in Japanese because in general the fundus is of the choroidal type. The macula appeared dark in contrast to the discolored areas. The left eye showed similar findings with the addition of a rather prominent choroidal ring.

After the eyes had been covered for two hours, ophthalmoscopic examination revealed a completely normal appearing fundus - all previous abnormal findings had disappeared, the choroidal vessels were now visible. The Mizuo Phenomenon had been demonstrated.

Various theories have been postulated concerning the etiology of the cardinal symptoms in Oguchi's Disease, i.e., hemeralopia, discoloration of the fundus, and the Mizuo Phenomenon. The most generally accepted theory is that the disturbance in dark-adaptation and the grayish-white discoloration are entirely unrelated. The hemeralopia is believed to be the result of rod dysfunction while the discoloration together with the Mizuo Phenomenon is attributed to a substance, as yet undefined, which is supposedly present in the distal portion of the rods and is photochemically sensitive.

Summary: An attempt has been made to familiarize the reader with an unusual ophthalmological condition which has received the attention of Japanese ophthalmologists, but which is practically unknown in America.

1. Intravenous Procaine Therapy, by Capt. A.T. Anton, MC, Chief Medical Service, 172nd Sta Hosp

The various common local uses of procaine are widely known, and used, and will not be made a part of this paper. In this paper, an attempt will be made to discuss the various uses of procaine administered intravenously by review of the literature and reporting several cases in which it was used at this hospital.

Procaine was first introduced under the trade name of novocaine. It was synthesized by Einhorn in 1905. Chemically, it is the Ester of B. di-ethyl amino

ethanol, and is used as the hydrochloride salt. It is a crystalline powder, water soluble and thermostable.

The rationale behind the intravenous use of this drug differed with the early workers. Lundy in the U.S. reported its use as a peripheral anesthetic in cases of pruritis. Dos Ghali, Bourdin and Guiot in Europe, approached its use on an anti-allergic basis. Recently in the United States and Canada, its intravenous use has been directed primarily towards the relief of pain. The mechanism by which this relief is obtained with the intravenous use, is explained by the theory that in areas of injury, inflammation and edema, the local increased capillary permeability allows the procaine to diffuse into the tissues and anesthetize the terminal nerve endings.

The physiological properties attributed to procaine are numerous. Many of them need further explanation and undoubtedly more will be discovered. The principal action ascribed to it is that it acts on nerve fibers, primarily sensory fibers, "by causing attenuation and disappearance of nerve conduction". (10) Its action on other than nerve cells is reportedly not harmful. Aside from its peripheral action, it is also a central convulsant when present in sufficient concentration at any one time. The concentrations which are necessary to produce this effect are not constant and vary with each individual. However, this property can be greatly diminished by the prophylactic administration of barbiturates prior to its use.

"Like cocaine, but to a lesser degree, procaine has the property of potentiating the responses of sympathetically innervated organs to epinephrine, sympathin, and to sympathetic nerve stimulation." (10)

Ravina (7) describes to it "sympatholytic effect, and can break the conduction of pain in the vegetative ganglionic or medullary relays."

Metabolically, procaine is hydrolyzed into Para-Amino Benzoic Acid and Di-ethyl Amino Ethanol. The site of this transformation has been reported as occurring in the blood stream by enzyme action, but more evidence points to the liver as the site of action. Once the procaine enters the blood stream, the hydrolysis is reported as being rapid, occurring within a period of minutes. The toxic effects of procaine itself bear no relationship to the concentration of its derivatives -- "for the toxic symptoms decrease even though the blood concentration of the derivatives increases". (5)

The reactions to procaine which one might experience from its usages are of two types. One, as a result of direct sensitivity, and the second as a result of its convulsive properties. The former appears as a respiratory-circulatory embarrassment, which can be combatted by the use of adrenalin. This can be even more successfully prevented by skin testing or history taking prior to its administration. At the Mayo Clinic, no patient who gave a previous history of tooth extraction or other local minor procedures, where procaine was in all probability used, revealed any sensitivity to skin testing. If the skin test is doubtful, a conjunctival test may be used. It is reported that the only contra-indication to the use of procaine when skin tests are made, is the appearance of systemic sensitivity. The convulsant reaction to procaine is effectively controlled by pre-sedation or immediate intravenous administration of barbiturates, but in most instances just discontinuing the drip for several minutes has been sufficient to abolish convulsions, and this is to be expected since the drug is rapidly hydrolyzed.

One of the early works reported on the intravenous use of procaine was by Breton and Guidoux. Their approach to the rationale of therapy was directed to states of allergy and anaphylaxis. In their work, they attempted to prevent anaphylactic shock by procaine injections, but failed to do so. However, they were able to novocainize patients sensitive to such drugs as quinine and novarsenobenzol, to such a degree, that rapid treatment of syphilis by massive doses of arseno therapy could be carried out without danger.

Tardieu reported his work in the intravenous use of procaine as failures. He acted on the assumption that cases of vascular collapse or pulmonary edema which were due to nervous lesions in the brain stem, could be combatted by paralyzing the intramural neurones of vessels. Using sclerosing-drugs, he produced a necrosis of the peduncles and when peripheral failure occurred, he started intravenous procaine but without effective results.

Van Haecke, Breton and Guidoux have used intravenous novocaine stat injections in cases of asthma and in tuberculous patients with respiratory distress, and have reported beneficial subjective results. The explanation for their results is that novocaine acts on the respiratory centers and modifies the rhythm favorably. How and why is unexplained.

Allen has reported successful goals by using intravenous procaine for purposes of obstetrical anesthesia. In his cases, the drug was started during the second stage of labor and carried through to delivery. Continuous I.V. method was used with solution strengths varying from .6 to 1% solution using an average total of 2 to 3-1/2 grams of procaine for each case. Aside from several cases of slight convulsions which were handled without difficulty, and a case of overdosage with barbiturates, labor, delivery and repair were completed satisfactorily. The degree of anesthesia produced was described as central, but the patients were able to realize their environment during the procedure and were able to regain consciousness within minutes following cessation of the drip without the common post-anesthetic symptoms.

McLachlin reported a series of cases in which he used continuous procaine drip as a substitute for morphine in post-operative cases. Included in his cases were post-operative sub-total gastrectomies, pyeloroplasty, cholecystectomy, inguinal hernia repairs and a case of lobectomy. In his first reported cases, he interspersed morphine and novocaine to determine comparative results. He concluded that novocaine gave the "longest and most comfortable period during the early post-operative course". In the later cases, he used only procaine with satisfactory results. As an example, in the lobectomy case, 500 cc's of saline containing 1 gram of novocaine was given 3 times in the first 24-hour period at 3, 5, and 9-hour intervals, and twice in the second 24-hour period with a 9-hour interval. This patient required no further sedation during the remaining post-operative course. With the use of novocaine alone, his patients were relatively symptomless, conscious and co-operative rather than inert under the effects of morphine.

Gordon recorded a series of ten cases wherein he used continuous intravenous novocaine to produce analgesia in patients with burns of varying degrees. In no case had any other analgesic been administered for at least 4 hours prior to treatment. Dressing of the burns included scrubbing the areas with gauze and in one case with a brush to remove phosphorous particles. In all cases, complete analgesia was evident during the procedure with the patient in a conscious state.

Allen, Grossman and Lyons attempted to extend the field of procaine analgesia using empirical clinical trials. The writers theorized that local permeability was a dominant factor in the distribution of procaine administered intravenously. Following Lundy's method, the authors administered novocaine to numerous cases only for demonstrative purposes. They obtained relief of pain in a patient with a displaced intervertebral disc -- in another with chronic angina pectoris secondary to chronic rheumatic heart disease -- in another patient with decubitus ulcers and in another with pain in a gangrenous foot. Following successful results, they attempted central anesthesia by increasing the rate of flow of their solution. Such anesthesia was obtained to the degree that, following routine orthopedic procedure in an impacted intracapsular fracture of the femur, the operation of nailing the fracture could be performed without causing the patient unnecessary pain. Another successful attempt was in the performance of a cholecystectomy under similar conditions of anesthesia. The anesthesia was satisfactory. Both patients withstood the procedures without harmful effect and their post-operative course was not accompanied by the usual after-effects of inhalation anesthesia. The only objection in the experiment was that complete muscular relaxation was not obtained, thereby necessitating a slightly larger than usual incision for the cholecystectomy.

State and Wangenstein report is the most recent in this review. These authors administered continuous intravenous procaine to cases of serum sickness, primarily for the relief of pain resulting from the arthralgia and myalgia. However, the results obtained were described as a "pleasant surprise" in that not only was the relief of pain afforded, but there was marked improvement of the myalgia, arthralgia, adenopathy, fever, tachycardia, urticaria and leukocytosis. In their series, 10 of 16 cases obtained immediate and complete relief; 4 obtained temporary or partial relief; and 2 were not benefited at all. One of their cases developed an acute anaphylactoid reaction, was treated by the same means and obtained relief in one hour, with the use of a slow drip. They state that "interestingly enough, this patient developed delayed serum sickness 19 days later, but on this occasion, it was definitely much less severe than on previous occasions." (10)

In the fall of 1947, a project was undertaken at this hospital to attempt to correlate the therapeutic effect of procaine to various sensitivity states. The project is beyond the scope of this paper, but it was initiated by the empirical use of procaine to cases which failed to respond to adrenalin sedation and local measures, and was then given to acute cases with what was diagnosed as a sensitivity reaction. None of the patients had received the popular anti-histamine drugs.

The routine carried out in each case was history of previous procaine injections, skin-testing with 0.1 cc of 1% procaine, a conjunctival test where indicated, and in some cases, pre-treatment sedation was given. In no case did sensitivity reactions occur and in no case were there convulsant reactions. The first case was that of a 23-year-old white female, a primipara, 5 months pregnant. Fourteen days prior, she developed manifestations of angio neurotic edema with severe

pruritis following exposure to weeds. For about 10 days prior to admission, she had received adrenalin, sedation, and local measures, with little relief. On admission, there was significant periorbital edema, indurated edema of the face, scattered areas of urticaria over the extremities and torso. She was given 1 gram of novocaine in 500 cc's of saline solution at a rate of about 3 cc's per minute. Within 15 minutes there was significant decrease in pruritis and a definite blanching of the areas of urticaria followed by a gradual dissolution of the wheals. Within 45 minutes there was significant decrease in periorbital facial and edema of the extremities. The following morning, about 50% of the signs persisted. She was then given 2 grams of procaine in 500 cc's of saline solution and there was dramatic improvement.

The next case is that of a 20-year-old male who developed generalized giant urticaria which was severe. He had been treated for four days with adrenalin and local measures with little relief. 2 grams of procaine in 1000 cc's of 5% glucose in water, was given as continuous I. V. infusion. Within 15 minutes the patient became almost symptomless and within a half hour there was evidence of blanching of the involved areas and a notable loss of edema in the forearms and hands. Twelve hours later, only a residual of urticaria remained and twenty-four hours later, all the signs had disappeared.

The next case was a soldier who was on the Surgical Service receiving sulfadiazine and penicillin. On the 5th day of treatment, he developed an acute and rapid onset of generalized symptomatic angio neurotic edema. 2 grams of procaine in 500 cc's of saline solution was started intravenously. Within an hour, there was almost complete resolution of the original manifestations. However, during the treatment, new areas of urticaria appeared in scattered previously unaffected localities, and they too went through the typical formation and resolution during the treatment. Within the next 24 hours scattered localized urticaria appeared, but by the end of 24 hours, they too, had disappeared without further treatment.

The 5th case was a patient who was under treatment for furunculosis of the neck and face. Four hours after receiving penicillin, oil and beeswax, he developed a generalized urticaria. Seven hours after onset, he was given 1 gram of procaine in 500 cc's solution of saline. Within 1-1/2 hours, the urticaria had disappeared. The edema of the various tissues decreased to about 50% and within 24 hours all the signs and symptoms had disappeared.

In summarizing these cases, it was felt that intravenous procaine solution appears to exert a specific action on allergic reactions manifested by angio neurotic edema and urticaria. Its action appeared to be more specific, and thorough, on acute cases in contrast to prolonged cases. The mode of action is not known. It was noted that the procaine did not exert a prophylactic action on previously demonstrably uninvolved tissues, but following procaine therapy, tissues that eventually became involved subsided much more rapidly than one would anticipate in an untreated case.

Speculation on the possible further uses of continuous intravenous procaine therapy opens a field of expectations. Some possible entities in which it might be tried are Acute Poliomyelitis -- one wonders if intravenous procaine would not afford as much relief, if not more so, than the local hot packs, since the rationale is at least similar in scope, which is relief of spasm and pain. Wangenstein suggests its use for pain in pulmonary infarct and if it is so used with the previously described results of procaine in cases of asthma, might one not also expect to find further relief of bronchial and bronchiolar spasm in such an acute episode? He also suggests its use in the pain of thrombophlebitis and Raynaud's Disease. The work of Allen also indicates that the drug is able to abolish labor in cases of pregnancy, if given in the first stage and because of this observation, he suggests it might be tried in cases of threatened abortion.

CONCLUSION. Included in this discussion were explanations for the actions of procaine, a review of the literature, a description of cases in sensitivity states who were treated with continuous intravenous procaine and suggestions as to possible future uses of continuous intravenous procaine therapy.

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XII. Diagnostic and Therapeutic Novocaine Injections in Orthopedic Practice - presented by
Colonel E. W. Hakala, MC (In two parts - Part II)

TREATMENT:

Inject all tender areas in the injured ligament until no tender or painful areas remain on palpation or on ankle or foot motion.

Then test for the degree of ligamentous damage, not forgetting to check for tear of the inferior tibio-fibular ligament. If the malleolar ligaments alone are involved and only partially torn, go ahead with the rest of the treatment.

Wrap an elastic bandage snugly around the foot and ankle, beginning just proximal to the toes, figure-eighting the heel and ankle and extending above the ankle.

Normal flexion and extension do not stretch the injured malleolar ligaments but inversion or eversion will. The patient is instructed to wear a high top shoe for additional protection against forced inversion and eversion movements of the ankle. He is to use the foot and ankle normally except that running, jumping, etc. should be avoided. The foot should be moved constantly even while sitting, to gently massage the hematoma and tissue fluid accumulation.

Elastic bandage is removed and re-wrapped in two hours to prevent possible circulatory constriction. The patient is then taught to apply it and it is kept on snugly during waking hours, being re-applied as necessary.

Re-injection is rarely necessary; it may be done.

The success of this treatment depends upon 2 factors:

(a) Total elimination of pain and tenderness by adequate injection.

(b) Continued use and motion of foot and ankle. This is vital. Pain, stiffness and swelling result and persist if the injection fails to relieve pain so that the patient limps and does not use the part normally or if he is apprehensive and does not move the part as instructed.

Many of the mild tears are treated with elastic bandage, high top boot and ambulation, without procaine injection.

SUB-DELTOID BURSITIS AND SUPRASPINATUS TENDINITIS: The basic pathology is usually a fraying of the supraspinatus tendon due to its rubbing against the edge of the acromion on abduction and rotary movements of the humerus. It is the result of overuse. For that reason it is most commonly seen after the age of 30 and most frequently among baseball players, orchestra conductors, violinists, typists, etc, who overuse their arms in abduction and rotation. Inflammation of the sub-deltoid bursa is usually secondary to the underlying tendinitis. Calcification takes place in the degenerated, relatively avascular tendon fibers. The calcium salts may get into the bursa by rupture of the necrotic tendon fibers, with temporary relief of the pain.

RATIONAL OF NOVOCAINE INJECTION:

Novocaine is said to induce a hyperemia and improved circulating in the tendon, with revascularization of the degenerated fibers and absorption of the calcium salts if they are still in the amorphous state.

Relieves pain. Combined with diathermy and rest many of the attacks are relieved.

With persistent pain, unrelieved by x-ray therapy, novocaine injections, etc. The logical treatment is excision of the offending lateral portion of the acromion.

TECHNIC:

Have patient sit in a chair with arms crossed the lap.

Find the point or points of maximum tenderness.

Inject directly into the tendon and bursa until all tenderness disappears.

Patient should be able to fully abduct and externally and internally rotate the humerus without pain on completion of the injection.

We prefer small gauge needles for this injection unless we suspect effusion in the bursa. In the latter case it is preferable to use a 17 gauge needle and attempt to aspirate the bursal fluid as well as make multiple punctures in the bursal wall to permit seepage into surrounding tissues with subsequent absorption.

Repeat the injections once weekly for 6 - 8 weeks if symptoms persist that long. Then get x-rays to determine whether calcification is decreasing.

Warn patient of aggravation of symptoms for about 24 hours after anesthesia wears off.

COCYGOODYNIA:

PATHOLOGY: Pathology is unknown, but as this condition frequently follows trauma it is presumed to be a periostitis. A few investigators believe that spasm of the levator ani and coccygens muscles is the primary cause of pain. Everyone believes this is a psychogenic element in every case.

RATIONALE: As above, improved circulation plus stretching of adhesion.

TECHNIC:

Patient can be injected in either the lithotomy position or in the prone position on a table broken in the middle with the head and feet lower than the hips.

Points of tenderness are located.

Posterior and lateral margins of coccyx are injected, with one finger in the rectum to prevent entering it with the needle.

FOLLOW-UP:

Patient must use a rubber ring for all sitting. One cannot deny the fact that this may be the most important single factor in the treatment.

Repeat once weekly until cured or until progress stabilizes. I have not been impressed by alcohol injection if novocaine injection is unsuccessful. I'd prefer to remove the coccyx in such a case but would try a prolonged series of gentle rectal massages of the levator ani and coccygens muscles once weekly to eliminate their spasm as an etiological factor before deciding on excision. Excision has not been uniformly successful in relieving the pain.

LOW BACK PAIN:

PATHOLOGY:

Despite recent emphasis on herniation of nucleus pulposus, the great majority of patients complaining of low back pain with or without sciatica have strains of soft tissues, muscular or ligamentous, as the basis for their difficulties.

In order to understand the logic of diagnosis and treatment, one must understand that there are three types of pain which may occur in any body part:

Local pain: Pain at the site of the lesion.

Radicular pain: Pain due to direct nerve pressure or inflammation in the exact distribution of the involved nerve.

Reflex pain: Pain impulses originating in a certain part, let's say, the lumbo-sacral region, enter the spinal cord at a segmental level. The potential synaptic connections in the cord are multiple. After daily bombardment of that level with pain impulses pretty soon a mis-connection is made and the brain interprets that pain impulse as coming from another body part. Thus one can have reflex sciatica without actual inflammation or pressure on the sciatic roots.

Thus, when one has ruled out osseous or joint lesions by history, physical examination, x-rays, lab work, etc., one ends up with a patient with low back pain, definite areas of tenderness in the back, with or without pain in the leg.

Steindler in 1938 called tender areas in the back due to muscular, fascial or ligamentous pathology, "trigger points"; he listed 6 principles syndromes based upon location of these trigger points as follows:

- Sacrospinalis syndrome
- Lumbosacral syndrome
- Gluteal syndrome
- Transversesacral syndrome
- Tensor fasciae femoris syndrome
- Myofascial syndrome

Injection of novocaine into the tender sites, with relief of local and reflex pains, indicates a soft tissue lesion amenable to supportive therapy or fascial surgery.

TECHNIC OF INJECTION:

Locate the trigger points

Make a skin wheal and insert a small spinal needle. If needling the tender area reproduces the local and reflex pain, inject 1% novocaine, usually 1 cc in each place.

If injection relieves local and reflex pains, the pathology must obviously be a soft tissue lesion.

FOLLOW-UP:

If the lesion is an acute tear of soft tissue, repeat every 3-4 days. Patient should keep torn tissue at rest, either in bed or with back support in the form of strapping, brace or cast.

If the lesion is a chronic fibrositis secondary to an already-healed soft tissue tear, one should prescribe stretching exercises during the anesthetic period to stretch adhesions and contracted myofascial structure.

Always follow-up with postural exercises.

FIBROSITIS:

DEFINITION: A syndrome characterized by pain, stiffness, aching or soreness, often appearing abruptly in any area of the body containing fibrous tissue (especially in muscles and around joints), more pronounced after prolonged inactivity, relieved usually by mild exercise, heat and procaine injections, and exhibiting practically no important physical signs except trigger points and occasional fibrous nodules in the affected region.

(ETIOLOGY: This is unknown. Repeated trauma, chilling of the body, chronic muscular strain are the most frequently cited causes.)

PATHOLOGY: This is unknown. There is no pathognomonic pathological lesion. The most commonly described course of events is:

A low grade inflammatory serofibrinous exudate with proliferation of fibroblasts and blood-vessels.

Local tissue-thickenings or gross subcutaneous nodules.

Fibrous contractures or capsular thickenings. Any tissue except bone may be involved-tendon, nerve, etc.

RATIONAL OF TREATMENT:

Anesthetize the origin of pain impulses.

Stretching exercises and vigorous massage during anesthetic, period to stretch contracted tissues and break up fibrous nodules.

Induce hyperemia with return of tissues to normal.

TECHNIC OF INJECTION:

Locate trigger points or tender nodules.

Inject 1% novocaine into all tender areas found by needle point.

All tenderness must disappear before stop injecting.

SCALenus CENTICUS SYNDROME:

PATHOLOGY: Spasm or hypertrophy of the scalenus centicus muscle caused elevation of the 1st rib with pressure on the underlying brachial plexus and/or subclavian artery. This causes pain and vascular disturbances in the arm and hand.

ETIOLOGY: A very interesting article entitled "Technic of Pain Control" in December 1947 issue of Surgical Clinics of North America defines 2 types of anterior scalene syndrome.

Primary type: One in which symptoms originate in and are due to an intrinsic disturbance of the anterior scalene muscle, either spasm or hypertrophy, usually due to trauma.

Secondary type: One in which there is reflex spasm of the anterior scalene muscle incited by pathology in tissues innervated by the 3rd to 7th cervical spinal nerves, or by pressure on these nerve roots.

DIFFERENTIAL DIAGNOSIS BETWEEN PRIMARY AND SECONDARY:

Complete even though temporary, relief of all symptoms after procaine injection of the scalene muscle indicates primary scalene syndrome.

Partial relief indicates a secondary syndrome.

Failure to get relief indicates absence of scalene syndrome.

TECHNIC OF INJECTION:

Scalenus anticus muscle underlies lateral border of the sterno-cleidomastoid muscle. It attaches to the 1st rib.

Isolate the lower portion of the muscle between 2 fingers and inject a few cc of novocaine into the muscle belly through a short needle.

If Horner's syndrome or anesthesia of any part of the brachial plexus occurs, it means the injection was too deep and is not reliable in differentiating primary from secondary syndromes.

FOLLOW-UP:

If a primary syndrome, re-inject several times. If no permanent relief is obtained, section the muscle.

If a secondary syndrome, find the primary lesion.

SUMMARY: Six conditions in which novocaine injection is of diagnostic or therapeutic value, or both, have been presented.

Indiscriminate puncturing of patients is not condoned, but it is believed that this procedure is not being used widely enough for cases in which the indications are clear.

XIII. Nursing Aspects of Ear, Nose and Throat Diseases - Rosemary Valls, 1st Lt., ANC, 10th General Hospital (PS), APO 1105



The symptoms of the infected ear include a more or less intense pain, according to the depth of the inflammatory process; tension of the skin, which sometimes becomes so great that the patient is unable to sleep, redness and swelling of the post superior portion of the canal. The temperature may be irregularly elevated during the first few days.

The symptoms of the nose are often noticed when there is difficulty in breathing. This difficulty is often due to obstruction of the nasal passages, caused by swollen mucosa. Other symptoms are high temperature, pain in all of the sinuses, resulting in severe headaches. The main thing that we must report is change in temperature, change in the degree of pain, the amount and character of drainage, or any presence of nose bleed.

Symptoms of the throat include the five cardinal symptoms, plus difficulty in breathing due to abnormal pressure from edema of the mucus membrane. Amount and character of sputum expectorated should be noted, if any.

Nursing care in ear, nose and throat infections must include strict observation of the rules of isolation. By this I mean, that the drainage and dressing waste should be handled with extreme care to prevent further spread of infection.

It is hard to make a patient of this type comfortable in the first few days, or the acute stage of the disease. But with initiative this can be done. During the acute stage of the disease expert nursing care should be given.

Equipment and technique of administering of:

1. Ear Irrigation:

- a. Purpose: Cleansing, antiseptic, and temperature effects in infections.
- b. Equipment: Solution of the kind, amount, and temperature ordered, sterile basin, towel, waterproof material to protect the patient and the bed, irrigating can or syringe.
- c. Cautions: If a can is used do not hold it more than six inches above the ear. Do not use force when irrigating. The temperature of the solution should be near that of the body of the patient. In an infant the canal is not built the same as an adult; this should be remembered when doing an ear irrigation.
- d. Record: The amount and character of discharge, nausea, dizziness or any other discomforts.

2. Ear Drops:

- a. Purpose: To relieve pain, inflammation, and congestion.
- b. Equipment: Solution of the right kind, temperature, and amount, medicine dropper, sterile basin, cotton, towel.
- c. Record: Any uncomfortable signs noticed, such as headache, dizziness, and nausea.

3. Throat Irrigations:

- a. Purpose: To soften mucus, stimulate circulation, relieve congestion, swelling, pain and to promote healing.
- b. Equipment: Irrigating can with tip, waterproof material, sterile basin, towels, disposable tissues.
- c. Cautions: Hold the can not more than 12 inches above the head. Too much force can be harmful when the patient is not accustomed to holding his breath. It is possible to either swallow or aspirate some of the fluid.
- d. Record: Time given, amount, temperature of the solution, and the patient's reaction.

4. Aersol Penicillin:

- a. Purpose: To apply locally to the nose and throat a penicillin solution mixed with oxygen to reduce pain and infection.
- b. Equipment: Penicillin solution of varied strength, oxygen tank, filter bottles with water to moisten the oxygen, a glass or plastic nebulizer.
- c. Method: Using the usual nebulizer, (preferably plastic), place 1 to 2 cc of varying strength of penicillin in the container and connect to a tank of oxygen. This will give enough pressure when turned on at 6-8 liters per minute to form a fine mist. The same result can be obtained by using a rubber bulb and pumping it by hand. This method usually takes longer and the patient cannot do the treatment with comfort. Therefore, it is time saving to personnel to use a tank of oxygen unless it is an emergency.
- d. Record: The amount and strength of the solution, time it takes to give it and the patient's reactions.

REFERENCE MATERIALS: Ballenger & Ballenger - Diseases of the Nose, Throat and Ears, pp 551-821
 Johnson, Artelle E. MD - Penicillin Aersol Therapy, AJN Dec 46, pp 834-835
 The Nurse in Penicillin Aersol Therapy. AJN Dec 46, pp 836
 Harmer & Henderson - The Principles and Practice of Nursing, pp 706-716

PART III - STATISTICAL

Evacuation

1. Tabulated below are the number of patients evacuated from the major commands to the ZI during the five report weeks in October and the number of patients awaiting evacuation as of 29 Oct 48:

	<u>BY AIR</u>	<u>BY WATER</u>	<u>TOTAL</u>	<u>PATIENTS AWAITING EVACUATION</u>
JAPAN	83*	3*	86*	142
MARBO	38	8	46	49
PHILCOM	9	8	17	16
RYCOM	14	2	16	6
FAR EAST COMMAND	<u>144</u>	<u>21</u>	<u>165</u>	<u>213</u>

(* Includes 25 patients who originated in Korea) During the five report weeks in October, 143 patients were evacuated from Korea to Japan, by air transportation, for further hospitalization and disposition or for onward evacuation to the ZI. As of 29 Oct 48, 26 patients in Korea were awaiting evacuation to Japan.

2. Evacuations military personnel per 1,000 strength for the period 25 September to 29 October 1948 were as follows:

JAPAN	.67	PHILCOM	.73
KOREA	5.1	RYCOM	.74
MARBO	1.9	FEC	.88

Hospitalization

1. The bed status as of 29 October 1948 was as follows:

RESTRICTED

	<u>Total T/O Beds Authorized</u>	<u>Total T/O Beds Establ.</u>	<u>Total T/O Beds Occupd</u>	<u>% Authorized T/O Beds Occupd</u>	<u>% of Establ. Beds Occupd</u>
JAPAN	4,450	4,499	2,432	55	54
KOREA	1,000	626	276	28	44
MARBO	825	425	369	45	87
PHILCOM	1,600	1,520	900	56	59
RYCOM	750	447	238	32	53
FEC	<u>8,625</u>	<u>7,517</u>	<u>4,215</u>	49	56

2. Admission rates per 1,000 troops per annum for the five week period ending 29 October 1948 were as follows:

	<u>FEC</u>	<u>JAPAN</u>	<u>KOREA</u>	<u>MARBO</u>	<u>PHILCOM</u>	<u>RYCOM</u>
All Causes	571	690	690	326	512	263
Disease	510	617	643	277	450	219
Injury	62	74	46	49	62	45
Psychiatric	18	20	32	17	9.4	3.8
Common Respiratory Disease	68	77	105	24	93	7.2
Influenza	2.7	4.5	.74	2.1	1.3	0
Primary Atypical Pneumonia	6.2	8.0	6.7	5.9	1.3	3.8
Common Diarrhea	4.5	1.8	12	1.3	8.1	5.3
Bacillary Dysentery	.50	0	.74	0	.45	2.9
Amebic Dysentery	1.9	.34	3.3	.42	8.5	.96
Malaria	5.2	.92	7.8	.42	14	16
Infectious Hepatitis	3.3	3.3	5.6	.84	5.4	.48
Mycotic Dermatoses	4.4	6.1	7.4	0	2.7	.48
Rheumatic Fever	.60	.57	1.1	0	.90	0
Venereal Disease	109	142	178	17	46	55

I N D E X

	<u>PAGE</u>
Army Medical School.	1
Automatic Pipette Washer	4
Diagnostic and Therapeutic Injections in Orthopedic Practice (Part II)..	15
Diagnosis of Influenza	7
Health of the Army	3
Intravenous Procaine Therapy	11
Nursing Aspects of Ear, Nose and Throat Diseases	19
Nursing Program, FEC	1
Oguchi's Disease - A Discussion on	10
Organization of the Medical Section.	1
Recent Department of the Army and FEC Publications	5
Smallpox Vaccination	7
Supplement to Paper "Compilation of Army Regulations and other Directives Pertaining to the Department of Army Policy in the Elimination of Inapt and Unadjustable Enlisted Personnel.	2



Major General Bethea extends an invitation to all personnel of the Medical Department to prepare and forward, with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted. Copy should be forwarded so as to reach the Medical Section, GHQ, FEC, not later than the 10th of the month preceding the issue in which publishing is desired.

Capt. Vincent I. Hack, Editor